DIGITAL PROJECTOR | MX711

10W Speaker x 2 · HDMI · DLP 3D READY · CRESTRON · PJLink™

Features

- Native XGA (1024x768) Resolution
- 3200 ANSI Lumens; 5300:1 Contrast Ratio
- Built-In 10W Speaker, Microphone-In
- LAN Control/Display, USB Reader/Display
- 3D Ready, Wireless Display (Optional)

Input and Output Terminals
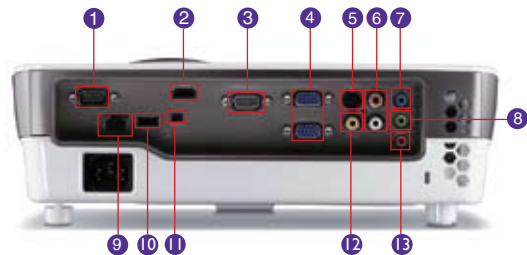
1	RS232 (DB 9-pin)	8	Audio Out (Mini Jack)
2	HDMI V1.3	9	LAN (RJ45)
3	Monitor Out (D-sub 15pin)	10	USB (Type-A)
4	Computer In 1 & 2 (D-sub15pin)	11	USB (Type Mini-B)
5	S-Video in (Mini DIN 4pin)	12	Video In (RCA)
6	Audio In L&R (RCA)	13	Microphone In (Mini Jack)
7	Audio In (Mini Jack)		

Specifications

Native Resolution	XGA (1024 x 768)	
Brightness	3200 ANSI lumens	
Contrast Ratio	5300:1 (Full on/Full off)	
Keystone	Manual & Auto Keystone Vertical ± 40 Degree	
Aspect Ratio	4:3 Native (5 selectable aspect ratio)	
Color	Full 16.7 million color palette	
Lens	F=2.59~2.87	
Zoom Ratio	Manual Zoom, 1.3:1	
Image Size (Diagonal)	32" to 300"	
Throw Ratio	1.5 to 1.97(65"@6.56ft.)	
Lamp	230W 3500/5000hrs(Normal/Economic mode)	
Computer Compatibility	VGA (640 x 480) to UXGA (1600 x 1200)	
HDTV Compatibility	480i, 480p, 576i, 576p, 720p, 1080i, 1080p	
Video Compatibility	NTSC, PAL, SECAM	
Horizontal Frequency	31-92 kHz	
Vertical Scan Rate	48-120 Hz	
Input Terminals	PC:	Analog RGB: D-sub 15 pin x 2 (shared with Component)
		LAN Networking: RJ-45 x1 (LAN Display)
		USB connector: Type A x1 (USB Reader)
		USB Type mini B x1 (USB display)
	A/V:	HDMI V1.3 x 1
		S-Video: Mini Din 4 pin x1
		Composite Video: RCA x1
	Audio:	Audio L/R : RCA x 1(set)
		Stereo Mini Jack x 1, Mic Input x1
Output Terminals	PC:	D-sub 15 pin x 1
		Variable Audio Out : Stereo Mini Jack x1
	Audio:	10W x1
Control Terminal	Serial Connector : RS232 x 1	
	RJ45 x 1 (LAN Control)	
	USB mini Type B x1(Page up/down) shared	
Dimensions(W x H x D)	12.24 x 4.09 x 9.6 inches (311 x 104 x 244 mm)	
Weight	5.94 lbs (2.7kg)	
Power Supply	100 to 240 VAC, 50/60 Hz	
Power Consumption	Max 306W, Standby < 1W	
Audible Noise	32/27dBA (Normal/Economic mode)	
On-Screen Languages	Bulgarian/ Croatian/ Czech/ Danish/ Dutch/ English/ Finnish/ French/ German/ Greek/ Hungarian/ Indonesian/ Italian/ Japanese/ Korean/ Norwegian/ Polish/ Portuguese/ Romanian/ Russian/ Simplified Chinese/ Spanish/ Swedish/ Turkish/ Thai/ Traditional Chinese (26 Languages)	
Picture Modes	Dynamic Mode, Cinema Mode	
	Presentation Mode , User 1 Mode, User 2 Mode	
	sRGB Mode	
Functions	BrilliantColor™	Blank
	VIDI™	Panel Key Lock
	3D Color Management	Auto Off
	Crestron LAN Control	Security Password
	Closed Captioning	HDTV Compatible
	Digital Zoom (x2)	High Altitude Mode
	Variable Audio Out	"Q?" Hot Key for FAQ
	Quick Cooling	3D Ready
	Quick Auto Search	Freeze
Accessories (Standard)	Quick Start Guide	VGA(D-sub) cable
	Manual CD	Power cord
	Remote control w/battery	Soft carry case
Accessories (Optional)	Spare Lamp Kit/	Wirless Dongle; Universal Ceiling Mount
Lamp P/N	P/N: 5J.J3V05.001	
Limited Warranty	3-Year Parts & Labor / 1-Year or 2000 hours of lamp life	

*Lamp life results will vary depending on environmental conditions and usage.

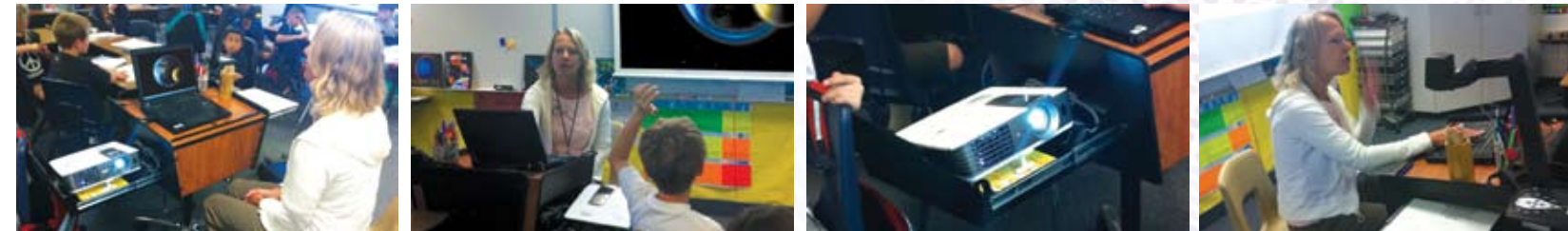MX711 8-01-11-US

DLP PICTURE BY TEXAS INSTRUMENTS · BrilliantColor

Great Expectations

Clovis Unified School District Raises the Bar on Classroom Collaboration With Projection System

BenQ MX711

Designed For Education...
- Future Proof · Affordable · Excellent Quality

BenQ Enjoyment Matters

- What is the learning curve for users?
- Who will instruct the faculty?
- What is the total cost of ownership?
- How easy is it to maintain?
- Who will do the maintenance?
- How long will this investment last?
- Which technology: DLP®, LCD, or OLED?

Chris Edmonson then populated his concerns on a spreadsheet and from that engineered a scientific formula. He assigned prioritization to each of the points, with the major issues having greater weight. The objective was that the district hit the "sweet spot" given their budget, communication, and user realities. Once the decision making process was defined, he started looking at specific brands and models, with an eye on two of his more major concerns: technology brightness and ease of use for teachers.

Situation And Challenge:

The Clovis Unified School District in Clovis, California, has high expectations for classroom technology. Administrators are charged with equipping instructors with effective solutions that are future- and bullet-proof, easy to utilize, and cost little to maintain. When it came to classroom communication technology, however, individual teachers had been acquiring different brands of TVs and projectors over the years. The result was a mishmash landscape of unique classrooms, making maintenance projections impossible, ease of use nonexistent, and consistent reliability a dream. To address these issues, the decision was made in 2009 to standardize on a collaborative classroom system and deploy it district wide.

The task of equipping over 2,000 teachers with technology that delivered on Clovis' expectations fell to Chris Edmonson, coordinator of educational technology and professional development for the school district. Chris Edmonson decided quickly that projectors were the technology of choice for the communication challenges within a classroom, with a cost that is equivalent or less than small flat screen displays. Selecting the right projector was a little more difficult. He took a strategic approach to the process, first listing out the many considerations he had to take into account?

- What is the real budget?
- What is the bottom line cost?
- What is the return?
- What is the cost of delaying?
- What is required to deploy?
- What is the deployment cost?
- Where will the funding come from?

DLP vs. Other Technologies:

DLP (Digital Light Processor) is a Texas Instruments® innovation, which constructs images in a radically different way than the traditional transparency processors. Chris Edmonson's research showed that DLP is superior in brightness to both LCD and OLED, and that its brightness lasts significantly longer. In addition, LCD experiences color erosion over time. Based on these factors, he decided on DLP technology.

Ease of Use:

Each Clovis classroom would feature at least three video sources – a DVD player, computer, and document camera – and the projector would have to integrate with each, making ease of use a considerable concern. The navigation between content sources, at least two of which had audio, could cause the instructor to become bogged down in switching an audio and video system. There was fear that this factor would cause instructors to underutilize the projectors or even avoid them altogether.

"The district needed an easy to use and easy to learn solution," said Chris Edmonson. "Usability sometimes takes a secondary role when educators start looking at adapting technology, but we made this a high priority imperative. "The thinking went along the lines that an investment of this magnitude needed to really accomplish our overall mission and sharpen our teachers' ability to communicate, not encumber them with the stress of having to worry about using the system."

The Brand Comparisons and Decision:

At the ISTE (International Society of Technology in Education) conference in Denver, Chris Edmonson compared numerous projector brands and models. Having already decided on DLP technology, he started looking for the best projector to fit Clovis' requirements. **Ultimately BenQ's MX711 won the projector "shoot out."**

The MX711 provided the greatest bang for the buck, in terms of brightness and ease of use. With a brightness of 3200 ANSI lumens and a high 5300:1 contrast ratio, the unit projects the brightest image in a real classroom environment, even more than projectors that cost over $300 more. The MX711 would also display the content from each classroom's Internet-enabled computer without effort from the instructors. The MX711 comes with an optional wireless display adaptor for USB 2.0 wireless WLAN connectivity, simplifying set-up and eliminating the clutter of cables. Using the projector's optional wireless dongle, the computer wirelessly flips the display and audio content seamlessly to the projector.

Since each classroom would have at least two audio sources, another important feature for Chris Edmonson was the MX711's built-in 10-W speaker and microphone input. The speaker is sealed and secured within the projector with BenQ's anti-shake design to deliver crisp and clear audio quality and projection stability, while the microphone input connects to conventional and wireless microphones and microphone headsets. The audio system is engineered to cover all but the most peculiar classroom layouts, and is designed to authentically reproduce voice frequencies, music, and even theatrical audio scenes cleanly and clearly across the entire spaces needed. Chris Edmonson determined "The incorporated speaker system and amplifier made this a 'no brainer.' The speaker clarity and dispersion pattern covers all our classrooms with power to spare."

And of course, keeping expenses to a minimum is a priority for any school. To that end, the MX711 offers the industry's lowest maintenance cost. "The greatest expense associated with projector maintenance is bulb replacement. To the uninitiated, the costs for most brands can be shocking, but BenQ's are reasonably priced" stated Chris Edmonson.

Beyond maintenance, there is also the issue of keeping up with constantly changing technology, and to that end, the MX711 helps provide Clovis with a future-proof solution with its 3D capabilities. If and when 3D curriculum becomes more widespread in the classroom, Clovis is in a position to implement it at a much faster rate, and without purchasing more equipment. Having this functionality ready to go keeps the district on the cutting edge at no addition cost.

Conclusion:

When addressing today's technology and communication mediums available to any district, the first question that comes up is cost. For Clovis, BenQ answered with a projector at a price that enabled the district to acquire a significant upgrade while managing overall expenditures, and meeting every criterion they had for the project.

Chris Edmonson concluded "Of all the technology projects I have been tasked with, this was by far the most successful and fulfilling endeavor. It is being utilized in more situations, across more educational disciplines, and has been adopted faster. The teachers now say they don't know how they lived without it, and the kids are learning more efficiently, which is really what it's all about."

BenQ
Enjoyment Matters